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10/092,323	03/06/2002	Steven M. Zink	02SW049	9035

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EXAMINER	
TRUONG, LAN DAI T	

ART UNIT	PAPER NUMBER
2152	

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/092,323

Applicant(s)

ZINK ET AL.

Examiner

Lan-Dai Thi Truong

Art Unit

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-19, 21, 22, 24-28 and 31-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-19, 21, 22, 24-28 and 31-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

1. This action is response to communications: application, filed 03/06/2002; amendment filed 04/12/2007. Claims 1-39 are pending; claims 8, 20, 23, 29-30 are canceled; claims 1, 21, 31-33 are amended. A new Non-final rejection is made regarding to new ground rejection for claim 32 under 35 USC § 101 rejection

### **Response to Arguments**

2. In response to Applicant's arguments with respect to the drawing objections are persuasive; the previous drawing objection is withdrawn

### **Claim rejections-35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant claims communications between a remote entity

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and an industrial controller. Therefrom the industrial includes a primary aggregation component which used for aggregating one or more selected items into subset of data items; then Applicant claims the subset of data items is transmitted by a communication component associated with the remote entity; Examiner does not clearly understand how the subset of data items (means aggregating from one or more selected items) can be existed at both the primary aggregation component and the remote entity. The correction is requested

### **Claim rejections-35 USC § 101**

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. The claim 32 is directed to non-statutory subject matter, i.e. signal. The claim includes “a signal to facilitate communications between a client application and an industrial controller, the signal comprising” in the preamble of the claim, renders non-statutory embodiments.

### **Claim rejections-35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-4, 9-12, 14, 18-19, 33-39 are rejected under 35 U.S.C 103(a) as being unpatentable over Crater et al. (U.S. 6,201,996) in view of Patel (U.S. 6,889,257)**

**Regarding claim 1:**

Carter discloses the invention substantially as claimed, including a system, which can be implemented in a computer hardware or software code for industrial controller comprising:

A primary aggregation component associated with an industrial controller defined and installed by an entity remote from the controller; a component associated with the entity remote from the industrial controller receives handle information from the industrial controller relating to the selected data items and employed the handle information to generate an update data packet into update data locations in the industrial controller: (Carter discloses “an object-oriented programmer industrial controller” which shares functionality with “the industrial controller” as claimed associates with “the action procedures/ of control structure for performing an action” which shares functionality with “a primary aggregation component” as claimed; those action procedures/ of control structures are defined by a remote computer via access from web page; each of control structure/action procedure is organized/built from aggregating object items; the remote computer can retrieve control parameters of action procedures/ control structures monitor, supervise, and “modifies” which shares functionality with “updated” as claimed the control parameters of the action procedures/ control structures; In Carter’s industrial control system, “network interface/ and program interface” those share functionality with “component” as claimed used to support communication between the object-oriented programmer industrial controller and the remote computer: abstract; column 3, lines 58-67; column 4, lines 45-67;

column 9, lines 60-67; column 10, lines 7-52; column 11, lines 28-67; column 12, lines 1-9;  
column 5, lines 52-67);

A communication component: (Carter discloses “network interface/ and program interface” which is also shares functionality with “a communication component” which is used to support communications between the industrial controller and the remote computer: figure 1, item 125; figure 2, items 210, 1251, 1252; figure 3, item 300)

However, Carter does not explicitly disclose step of using the communication component for transmitting the subset of data items via a singular communications packet across a network and adds at least one secondary aggregation component based upon at least one of increased data demands and network protocol considerations;

In analogous art, Patel discloses the remote computer including a network interface communicates with the streaming media server for transmitting “selected streamable data objects/ aggregated packet” which shares functionality with “the subset of data items” from the streaming media server to selected remote computer; although Patel does not explicitly disclose step of adding at least one more aggregation component; However, Patel discloses method for determining system conditions of the server in order to modifying/and adjusting packets aggregating process of transmitting the data packets to the client computer; it would have been obvious in the art to know that it needs at least one additional aggregation component responsive to increased data demands in order to reduce numbers of lost packets and bandwidth utilizing in the packet transmission network; see (abstract; column 2, lines 35-67, 40-44; column 3, lines 25-67; column 4, lines 34-67; column 5, lines 1-31)

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Patel's ideas of aggregating packets into aggregated packet prior transmitting them into a network with Carter's system in order to be able to speed-up packets transmitting process, reduce packets lost and bandwidth utilizing, see (Patel: column 8, lines 1-14)

**Regarding claim 33:**

Crater-Patel discloses a method as discuss in claim 1, which further includes a component process information received from a remote entity: (Carter discloses communications between the controller and the remote computer, wherein the remote computer can retrieve, monitor, supervise and modify control parameters of action procedures/ of control structures of the controller; it would have been obvious in the art to know that either the controller/ and the remote computer should include at least "one interface program/component" which shares functionality with "a component" as claimed used for supporting their communications: abstract; column 3, lines 58-67; column 4, lines 45-67; column 9, lines 60-67; column 10, lines 7-52; column 11, lines 28-67; column 12, lines 1-9; column 5, lines 52-67)

**Regarding claim 11:**

Crater-Patel discloses a method as discuss in claim 1, which further includes object including association classes: (Crater: column 11, lines 1-15)

**Regarding claim 12:**

This claim is rejected under rationale of claim 11

**Regarding claims 35 and 39:**

Those claims are rejected under rationale of claim 33

**Regarding claim 2:**

In addition to rejection in claim 1, Crater-Patel further discloses client application that can select and request subsets of data items from the controller: (Carter discloses the remote computer can retrieve, monitor, supervise, and modifies control parameters of action procedures/ of control structures: abstract; column 3, lines 58-67; column 4, lines 45-67; column 9, lines 60-67; column 10, lines 7-52; column 11, lines 28-67; column 12, lines 1-9; column 5, lines 52-67)

**Regarding claim 3:**

In addition to rejection in claim 2, Crater-Patel further discloses Human and Machine Interface: (Crater disclose webpage used for interacting between designers/engineers and the object-oriented programmer industrial controller; it would have been obvious in the art to know that at least one interface program/software included in Crater's system for supporting communications between the remote computer and the object-oriented programmer industrial controller: column 7, lines 1-67; column 8, lines 40-45; column 5, lines 14-67; column 6, lines 1-41, 50-67)

**Regarding claim 4:**

In addition to rejection in claim 2, Crater-Patel further discloses a communication server: (Crater's system includes a server: column 6, lines 25-45)

**Regarding claim 36:**

In addition to rejection in claim 34, Crater-Patel further discloses the network is at least one of an Ethernet, ControlNet, a DeviceNet, RS-232, RS-422, RS-485: (Crater's system implements for "industrial controlling" which shares functionality with either controlNet or DeviceNet as claimed: abstract)



**Regarding claim 10**

In addition to rejection in claim 1, Crater-Patel further discloses dynamically increasing and decreasing the amount of selected data items in the primary aggregating component based upon data demands received from the network: (Patel also discloses method for determining system conditions of the server in order to modifying/adjusting packets aggregating process of transmitting the data packets to the client computer; it would have been obvious in the art to know that it needs at least one addition aggregation component based upon increased data demands in order to reduce numbers of lost packets while transmitting over the network; see (abstract; column 2, lines 35-67, 40-44; column 4, lines 34-67; column 5, lines 1-31)

**Regarding claim 9:**

In addition to rejection in claim 1, Crater-Patel further discloses removing the one or more secondary aggregation component: (Patel discloses method for determining system conditions of the server in order to be able to modifying/adjusting packets aggregating process of transmitting the data packets to the client computer; it would have been obvious in the art to know that it needs at least one addition aggregation component according to increasing data in transmitting network; and vice versa ; it would have been obvious in the art to know that Patel's aggregation system also can be able to remove the one or more secondary aggregation component based upon decreased data demands for save memory purpose; see (abstract; column 2, lines 35-67, 40-44; column 4, lines 34-67; column 5, lines 1-31)

**Regarding claims 18-19:**

Those claims are rejected under rationale of claim 9

**Regarding claim 14:**

In addition to rejection in claim 11, Crater-Patel further discloses services include at least one of Get All Attributes, Get All List, Set Attribute List, Reset, Start, Stop, Create Object and delete Object: (Patel disclose method for creating Object: column 1, lines 25-32)

**Regarding claim 34:**

Crater-Patel discloses a method as discuss in claim 33, which further includes memory: (Crater discloses “database” which shares functionality with “memory” as claimed used for storing objects: figure 3, item 315)

**Regarding claim 37:**

Crater-Patel discloses a method as discuss in claim 35, which further includes the communication driver: (Crater discloses “network interface/ or machine interface” those share functionality with “communication driver”: figure 2, items 215, 210; figure 3, item 300)

**Regarding claim 38:**

Crater-Patel discloses a method as discuss in claim 35, which further includes HMI: (Crater: column 19, line 27)

**Claims 5-7, 13, 15-17 are rejected under 35 U.S.C 103(a) as being un-patentable over Crater-Patel in view of Bhatt et al. (U.S. 6,097,399)**

**Regarding claim 5:**

Crater-Patel discloses the invention substantially as disclosed in claim 1, but does not explicitly teach sending request to the industrial controller relating to the subset of data items

In analogous art, Bhatt discloses aggregating device receives plurality of selected data in order to produce an aggregated data: (column 5, lines 11-14; column 6, lines 1-17)

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Bhatt's ideas of producing an aggregated data from received selecting data items with Crater-Patel's system in order to speed up transmitting time, see (Bhatt: column 4, lines 45-55)

**Regarding claims 6-7:**

In addition to rejection in claim 5, Crater-Patel-Bhatt further discloses step of including tag and value information associated with tag in to response, the tag and value information relating to the subset of data items; employing the tag and value information to build the primary aggregation component from the response: (Bhatt discloses aggregating device receives plurality of selected data in order to produce "an aggregated data" which shares functionality with "object" as claimed; it would have been obvious in the art the well-know knowledge of including tag information in data header: column 5, lines 11-14; column 6, lines 1-17)

**Regarding claim 13:**

Crater-Patel discloses the invention substantially as disclosed in claim 11, but does not explicitly teach setting for at least one of object update times, event triggers, whether to update the object based on rate, demand and other criteria, wherein a data stream triggers are located, whether to continue on an over flow, number of driers currently installed, timestamp information, size of buffers, start times, and object lifetime settings

In analogous art, Bhatt discloses "intervals" which shares functionality with "object lifetime setting" for aggregating data items to produce an aggregated data: (column 5, lines 11-14; column 6, lines 1-17)

**Regarding claims 15-17:**

Those claims are rejected under rationale of claim 11

**Claims 21-22, 24 and 31-32 are rejected under 35 U.S.C 103(a) as being unpatentable over Crater et al. (U.S. 6,201,996) in view of Bhatt et al. (U.S. 6,097,399) and further in view of Wang et al. (U.S. 6,970,921)**

**Regarding claim 21:**

Crater discloses the invention substantially as claimed, including a method, which can be implemented in a computer hardware or software code for industrial controller comprising:

Receiving the handle information from the industrial controller relating the selecting data items; employing the handle information to generate an update packet to update data locations in the industrial controller; updating object data on the controller; receiving data from the object that has been updated by the controller: (Carter discloses communications between the object-oriented programmer industrial controller and the remote computer through a web page; wherein the remote computer can retrieve, monitor, supervise, and “modifies” which shares functionality with “updated” as claimed control parameters of action procedures/ of control structures of the object-oriented programmer industrial controller: abstract; column 3, lines 58-67; column 4, lines 45-67; column 9, lines 60-67; column 10, lines 7-52; column 11, lines 28-67; column 12, lines 1-9; column 5, lines 52-67);

However, Crater does not explicitly disclose step of requesting tag information from a controller; adding data items of interesting to object

In analogous art, Bhatt discloses aggregating device receives plurality of selected data in order to produce “an aggregated data” which shares functionality with “object” as claimed;

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Although Crater does not explicitly disclose tag information; however it would have been obvious in the art the well-know knowledge of including tag information in data header: (column 5, lines 11-14; column 6, lines 1-17)

However, Crater- Bhatt does not explicitly teach arranging data items according to at least one of contiguous and non-contiguous address memory locations

Wang discloses method of arranged data packets in contiguous and non-contiguous space in memory: (abstract, lines 1-20)

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate Bhatt's ideas of aggregating device receives plurality of selected data in order to produce an aggregated data and Wang's ideas of storing transmitting data in contiguous and non-contiguous buffers with Crater- Bhatt's system in order to maximize packets transmitting rate and reduce data packet lost, see (Bhatt: column 4, lines 5-12)

**Regarding claim 31:**

This claim is rejected under rationale of claim 21. Examiner interprets the "constructing an optimized data packet" which is equivalent to "building an object" of claim 21; "refreshing the optimized data packet" is equivalent to "updating object data" of claim 21

**Regarding claim 32:**

This claim is rejected under rationale of claim 21

**Regarding claim 22**

In addition to rejection in claim 21, Crater-Bhatt-Wang further discloses Internet connection: (Crater: column 4, lines 65-67; column 5)

**Regarding claim 24:**

In addition to rejection in claim 21, Crater-Bhatt-Wang further discloses updating Object via at least one of periodic occurrence, an event driven occurrence, and a request: (Crater discloses an authorization person request to modify control parameters: column 10, lines 34-53)

**Claims 25-26 are rejected under 35 U.S.C 103(a) as being un-patentable over Crater-Bhatt-Wang in view of Patel (U.S. 6,889,257)**

**Regarding claims 25-26:**

Crater-Bhatt-Wang discloses the invention substantially as disclosed in claim 21, but does not explicitly teach method for removing object

In analogous art, Patel discloses method for determining system conditions of the server in order to be able to modifying/adjusting packets aggregating process of transmitting the data packets to the client computer; it would have been obvious in the art to know that it needs at least one addition aggregation component based upon decreased data demands; vice versa; it would have been obvious in the art to know that Patel's aggregation system also can be able to remove the one or more secondary aggregation component based upon decreased data demands for save memory purpose; see (abstract; column 2, lines 35-67, 40-44; column 4, lines 34-67; column 5, lines 1-31)

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Patel's ideas of aggregating packets into aggregated packet prior transmitting them into a network with Crater-Bhatt-Wang's system in order to be able to reduce packets lost and bandwidth utilizing, see (Patel: column 8, lines 1-14)

**Claims 27-28 are rejected under 35 U.S.C 103(a) as being un-patentable over Crater-Bhatt-Wang in view of McCoskey et al. (U.S. 2003/0028889)**

**Regarding claim 27:**

Crater-Bhatt-Wang discloses the invention substantially as disclosed in claim 21, but does not explicitly teach placing data into scanning list

In analogous art, McCoskey discloses method of placing suggestion data in a scan list:  
[0094]

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine McCoskey's ideas of placing suggestion data in a scan list with Crater-Bhatt-Wang's system in order to employ a well-know standard for saving resources and development time

**Regarding claim 28:**

This claim is rejected under rationale of claim 24

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents and publications are cited to further show the state of the art with respect to "System and methodology providing Optimized data exchange with industrial controller": 6223224; 6542930; 6624388; 7111057; 6438538; 6970921; 20030028889; 5414837; 20020116364; 6625161; 6385201; 5701462; 2001012050;

**Conclusions**

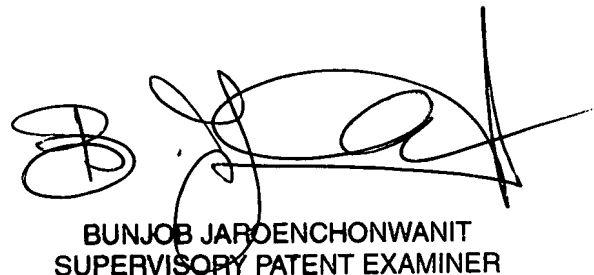
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan-Dai Thi Truong whose telephone number is 571-272-7959. The examiner can normally be reached on Monday- Friday from 8:30am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob A. Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

04/26/2007



BUNJOB JAROENCHONWANIT  
SUPERVISORY PATENT EXAMINER



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